

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/526,125
Source: IFWP
Date Processed by STIC: 8/14/06

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/526,125

CRF Edit Date: 8/14/06
Edited by: h

___ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

___ Deleted: ___ invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

___ Moved responses to same line as heading/numeric identifier, specifically:

✓
___ Other: deleted multiple <1107's



IFWP

RAW SEQUENCE LISTING

DATE: 08/14/2006

PATENT APPLICATION: US/10/526,125

TIME: 15:41:59

Input Set : N:\AMC\Sequence listing.txt

Output Set: N:\CRF4\08142006\J526125.raw

```

3 <110> APPLICANT: CHIRON SRL
4     PIZZA Mariagrazia
5     MASIGNANI Vega
7 <120> TITLE OF INVENTION: MUTANT FORMS OF MENINGOCOCCAL ADP-RIBOSYLATING TOXIN
9 <130> FILE REFERENCE: P031668WO / PP19813.002
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/526,125
C--> 11 <141> CURRENT FILING DATE: 2005-02-28
11 <150> PRIOR APPLICATION NUMBER: GB-0220205.9
12 <151> PRIOR FILING DATE: 2002-08-30
14 <160> NUMBER OF SEQ ID NOS: 13
16 <170> SOFTWARE: SeqWin99, version 1.02
18 <210> SEQ ID NO: 1
19 <211> LENGTH: 145
20 <212> TYPE: PRT
21 <213> ORGANISM: Neisseria meningitidis
23 <400> SEQUENCE: 1
24 Met Gly Asn Phe Leu Tyr Arg Gly Ile Ser Cys Gln Gln Asp Glu Gln
25 1             5             10             15
27 Asn Asn Gly Gln Leu Lys Pro Lys Gly Asn Lys Ala Glu Val Ala Ile
28             20             25             30
30 Arg Tyr Asp Gly Lys Phe Lys Tyr Asp Gly Lys Ala Thr His Gly Pro
31             35             40             45
33 Ser Val Lys Asn Ala Val Tyr Ala His Gln Ile Glu Thr Gly Leu Tyr
34             50             55             60
36 Asp Gly Cys Tyr Ile Ser Thr Thr Thr Asp Lys Glu Ile Ala Lys Lys
37 65             70             75             80
39 Phe Ala Thr Ser Ser Gly Ile Glu Asn Gly Tyr Ile Tyr Val Leu Asn
40             85             90             95
42 Arg Asp Leu Phe Gly Gln Tyr Ser Ile Phe Glu Tyr Glu Val Glu His
43             100            105            110
45 Pro Glu Asn Pro Asn Glu Lys Glu Val Thr Ile Arg Ala Glu Asp Cys
46             115            120            125
48 Gly Cys Ile Pro Glu Glu Val Ile Ile Ala Lys Glu Leu Ile Glu Ile
49             130            135            140
51 Asn
52 145
55 <210> SEQ ID NO: 2
56 <211> LENGTH: 145
57 <212> TYPE: PRT
58 <213> ORGANISM: Neisseria meningitidis
60 <400> SEQUENCE: 2
61 Met Gly Asn Phe Leu Tyr Arg Gly Ile Ser Cys Gln Gln Asp Glu Gln
62 1             5             10             15

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RAW SEQUENCE LISTING

DATE: 08/14/2006

PATENT APPLICATION: US/10/526,125

TIME: 15:41:59

Input Set : N:\AMC\Sequence listing.txt

Output Set: N:\CRF4\08142006\J526125.raw

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64 Asn Asn Gly Gln Leu Lys Pro Lys Gly Asn Lys Ala Glu Val Ala Ile
65          20          25          30
67 Arg Tyr Asp Gly Lys Phe Lys Tyr Asp Gly Lys Ala Thr His Gly Pro
68          35          40          45
70 Ser Val Lys Asn Ala Val Tyr Ala His Gln Ile Glu Thr Gly Leu Tyr
71          50          55          60
73 Asp Gly Cys Tyr Ile Ser Thr Thr Thr Asp Lys Glu Ile Ala Lys Lys
74 65          70          75          80
76 Phe Ala Thr Ser Ser Gly Ile Glu Asn Gly Tyr Ile Tyr Val Leu Asn
77          85          90          95
79 Arg Asp Leu Phe Gly Gln Tyr Ser Ile Phe Glu Tyr Asp Val Glu His
80          100          105          110
82 Pro Glu Asn Pro Asn Glu Lys Glu Val Thr Ile Arg Ala Glu Asp Cys
83          115          120          125
85 Gly Cys Ile Pro Glu Glu Val Ile Ile Ala Lys Glu Leu Ile Glu Ile
86          130          135          140

```

88 Asn

89 145

92 <210> SEQ ID NO: 3

93 <211> LENGTH: 145

94 <212> TYPE: PRT

95 <213> ORGANISM: Neisseria meningitidis

97 <400> SEQUENCE: 3

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98 Met Gly Asn Phe Leu Tyr Arg Gly Ile Ser Cys Gln Gln Asp Glu Gln
99 1          5          10          15
101 Asn Asn Gly Gln Leu Lys Pro Lys Gly Asn Lys Ala Glu Val Ala Ile
102          20          25          30
104 Arg Tyr Asp Gly Lys Phe Lys Tyr Asp Gly Lys Ala Thr His Gly Pro
105          35          40          45
107 Ser Val Lys Asn Ala Val Tyr Ala His Gln Ile Glu Thr Gly Leu Tyr
108          50          55          60
110 Asp Gly Cys Tyr Ile Ser Thr Thr Thr Asp Lys Glu Ile Ala Lys Lys
111 65          70          75          80
113 Phe Ala Thr Ser Ser Gly Ile Glu Asn Gly Tyr Ile Tyr Val Leu Asn
114          85          90          95
116 Arg Asp Leu Phe Gly Gln Tyr Ser Ile Phe Glu Tyr Glu Val Asp His
117          100          105          110
119 Pro Glu Asn Pro Asn Glu Lys Glu Val Thr Ile Arg Ala Glu Asp Cys
120          115          120          125
122 Gly Cys Ile Pro Glu Glu Val Ile Ile Ala Lys Glu Leu Ile Glu Ile
123          130          135          140

```

125 Asn

126 145

129 <210> SEQ ID NO: 4

130 <211> LENGTH: 145

131 <212> TYPE: PRT

132 <213> ORGANISM: Neisseria meningitidis

134 <400> SEQUENCE: 4

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135 Met Gly Asn Phe Leu Tyr Arg Gly Ile Ser Cys Gln Gln Asp Glu Gln

```

RAW SEQUENCE LISTING

DATE: 08/14/2006

PATENT APPLICATION: US/10/526,125

TIME: 15:41:59

Input Set : N:\AMC\Sequence listing.txt

Output Set: N:\CRF4\08142006\J526125.raw

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136 1           5           10           15
138 Asn Asn Gly Gln Leu Lys Pro Lys Gly Asn Lys Ala Glu Val Ala Ile
139           20           25           30
141 Arg Tyr Asp Gly Lys Phe Lys Tyr Asp Gly Lys Ala Thr His Gly Pro
142           35           40           45
144 Ser Val Lys Asn Ala Val Tyr Ala His Gln Ile Glu Thr Gly Leu Tyr
145           50           55           60
147 Asp Gly Cys Tyr Ile Ser Thr Thr Thr Asp Lys Glu Ile Ala Lys Lys
148 65           70           75           80
150 Phe Ala Thr Ser Ser Gly Ile Glu Asn Gly Tyr Ile Tyr Val Leu Asn
151           85           90           95
153 Arg Asp Leu Phe Gly Gln Tyr Ser Ile Phe Glu Tyr Glu Val Glu His
154           100          105          110
156 Pro Glu Asn Pro Asn Glu Lys Asp Val Thr Ile Arg Ala Glu Asp Cys
157           115          120          125
159 Gly Cys Ile Pro Glu Glu Val Ile Ile Ala Lys Glu Leu Ile Glu Ile
160          130          135          140

```

162 Asn

163 145

166 <210> SEQ ID NO: 5

167 <211> LENGTH: 14

168 <212> TYPE: PRT

169 <213> ORGANISM: Neisseria meningitidis, serogroup B

171 <400> SEQUENCE: 5

172 Phe Leu Ala Lys Leu Leu Lys Asp Phe Arg Arg Ile Thr Leu

173 1 5 10

175 <210> SEQ ID NO: 6

176 <211> LENGTH: 600

177 <212> TYPE: DNA

178 <213> ORGANISM: Neisseria meningitidis, serogroup B

180 <400> SEQUENCE: 6

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181 tatttcttggc gaagctgttg aaagacttcc gccgcattac cttataaaat aaaacatccc 60
182 tctcaagcag tctgataatg tttggattgc ttgagattga tgagtaatgg tgttaaattc 120
183 aacctttaaa ttaataactt atgggaaatt tcttatatag aggcattagt tgccaacaag 180
184 atgagcaaaa taatggacag ttaaaaccta aaggtataaa agctgaagtt gcaattcgtt 240
185 atgatggtaa gtttaaatat gatggtaaaag ctacacatgg tccaagtgtg aagaatgcag 300
186 tttacgcca tcaaattgaa acaggtctat atgacggatg ttatatatct acgacaacag 360
187 acaaggaaat tgccaagaaa ttgcaacaa gttccggcat cgaaaatggc tatatatatg 420
188 ttttaaatag ggatttgttt ggtcaatatt ctatttttga atatgagggt gaacatccag 480
189 aaaacccaaa tgagaaggaa gtaacaatca gagctgaaga ttgtggctgt attcctgaag 540
190 aagtgattat tgctaaagag ttgatagaaa ttaactaagt tgaaagggtc atataatggc 600

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192 <210> SEQ ID NO: 7

193 <211> LENGTH: 180

194 <212> TYPE: DNA

195 <213> ORGANISM: Neisseria meningitidis, serogroup A

197 <400> SEQUENCE: 7

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198 tattcctggc caacctgttg aaagacttcc gccgcattac tctgtaatcc gagcattttc 60
199 agacggcctg aataaaaagg ccgtctgaaa aaagaagtcc gaacatcatt cagaaagatt 120
200 agacatgagc ttagttgaat tgaaagtgcc cgacattggc ggtcacgaaa atgtagatat 180

```

RAW SEQUENCE LISTING

DATE: 08/14/2006

PATENT APPLICATION: US/10/526,125

TIME: 15:41:59

Input Set : N:\AMC\Sequence listing.txt

Output Set: N:\CRF4\08142006\J526125.raw

```

202 <210> SEQ ID NO: 8
203 <211> LENGTH: 14
204 <212> TYPE: PRT
205 <213> ORGANISM: Neisseria meningitidis, serogroup A
207 <400> SEQUENCE: 8
208 Phe Leu Ala Asn Leu Leu Lys Asp Phe Arg Arg Ile Thr Leu
209 1          5          10
211 <210> SEQ ID NO: 9
212 <211> LENGTH: 19
213 <212> TYPE: PRT
214 <213> ORGANISM: Neisseria meningitidis, serogroup A
216 <400> SEQUENCE: 9
217 Met Ser Leu Val Glu Leu Lys Val Pro Asp Ile Gly Gly His Glu Asn
218 1          5          10          15
220 Val Asp Ile
224 <210> SEQ ID NO: 10
225 <211> LENGTH: 180
226 <212> TYPE: DNA
227 <213> ORGANISM: Neisseria gonorrhoeae
229 <400> SEQUENCE: 10
230 tattctctggc gaacctgttg aaagacttcc gccgcattac cttataaaat aaaacatccc 60
231 tctcaagcag tctgataatg tttggattgc ttgagattga tgagtgatgg tgttaaattc 120
232 aaactttaaa ttaataactt atgggaaatt tcttatttat atagaggcat tagttgcaa 180
234 <210> SEQ ID NO: 11
235 <211> LENGTH: 14
236 <212> TYPE: PRT
237 <213> ORGANISM: Neisseria gonorrhoeae
239 <400> SEQUENCE: 11
240 Phe Leu Ala Asn Leu Leu Lys Asp Phe Arg Arg Ile Thr Leu
241 1          5          10
243 <210> SEQ ID NO: 12
244 <211> LENGTH: 7
245 <212> TYPE: PRT
246 <213> ORGANISM: Neisseria gonorrhoeae
248 <400> SEQUENCE: 12
249 Met Gly Asn Phe Leu Phe Ile
250 1          5
252 <210> SEQ ID NO: 13
253 <211> LENGTH: 147
254 <212> TYPE: PRT
255 <213> ORGANISM: Vibrio cholerae
257 <400> SEQUENCE: 13
258 Lys Leu Tyr Arg Ala Asp Ser Arg Pro Pro Asp Glu Ile Lys Gln Ser
259 1          5          10          15
261 Gly Gly Leu Met Pro Arg Gly Gln Ser Glu Tyr Phe Asp Arg Gly Thr
262          20          25          30
264 Gln Met Asn Ile Asn Leu Tyr Asp His Ala Arg Gly Thr Gln Thr Gly
265          35          40          45
267 Phe Val Arg His Asp Asp Gly Tyr Val Ser Thr Ser Ile Ser Leu Arg

```

RAW SEQUENCE LISTING

DATE: 08/14/2006

PATENT APPLICATION: US/10/526,125

TIME: 15:41:59

Input Set : N:\AMC\Sequence listing.txt

Output Set: N:\CRF4\08142006\J526125.raw

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268      50      55      60
270 Ser Ala His Leu Val Gly Gln Thr Ile Leu Ser Gly His Ser Thr Tyr
271 65      70      75      80
273 Tyr Ile Tyr Val Ile Ala Thr Ala Pro Asn Met Phe Asn Val Asn Asp
274      85      90      95
276 Val Leu Gly Ala Tyr Ser Pro His Pro Asp Glu Gln Glu Val Ser Ala
277      100      105      110
279 Leu Gly Gly Ile Pro Tyr Ser Gln Ile Tyr Gly Trp Tyr Arg Val His
280      115      120      125
282 Phe Gly Val Leu Asp Glu Gln Leu His Arg Asn Arg Gly Tyr Arg Asp
283      130      135      140
285 Arg Tyr Tyr
286 145

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/526,125

DATE: 08/14/2006

TIME: 15:42:00

Input Set : N:\AMC\Sequence listing.txt

Output Set: N:\CRF4\08142006\J526125.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date

**Raw Sequence Listing before editing
(for reference only)**



IFWP

*delete
duplicate
<110's*

RAW SEQUENCE LISTING

DATE: 08/09/2006

PATENT APPLICATION: US/10/526,125

TIME: 09:34:27

Input Set : F:\Sequence listing.txt

Output Set: N:\CRF4\08092006\J526125.raw

8 <110> APPLICANT: CHIRON SRL
 W--> ~~4~~ <110> APPLICANT: PIZZA Mariagrazia
 W--> 5 <110> APPLICANT: MASIGNANI Vega
 7 <120> TITLE OF INVENTION: MUTANT FORMS OF MENINGOCOCCAL ADP-RIBOSYLATING TOXIN
 9 <130> FILE REFERENCE: P031668WO / PP19813.002
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/526,125
 C--> 11 <141> CURRENT FILING DATE: 2005-02-28
 11 <150> PRIOR APPLICATION NUMBER: GB-0220205.9
 12 <151> PRIOR FILING DATE: 2002-08-30
 14 <160> NUMBER OF SEQ ID NOS: 13
 16 <170> SOFTWARE: SeqWin99, version 1.02
 18 <210> SEQ ID NO: 1
 19 <211> LENGTH: 145
 20 <212> TYPE: PRT
 21 <213> ORGANISM: Neisseria meningitidis
 23 <400> SEQUENCE: 1
 24 Met Gly Asn Phe Leu Tyr Arg Gly Ile Ser Cys Gln Gln Asp Glu Gln
 25 1 5 10 15
 27 Asn Asn Gly Gln Leu Lys Pro Lys Gly Asn Lys Ala Glu Val Ala Ile
 28 20 25 30
 30 Arg Tyr Asp Gly Lys Phe Lys Tyr Asp Gly Lys Ala Thr His Gly Pro
 31 35 40 45
 33 Ser Val Lys Asn Ala Val Tyr Ala His Gln Ile Glu Thr Gly Leu Tyr
 34 50 55 60
 36 Asp Gly Cys Tyr Ile Ser Thr Thr Thr Asp Lys Glu Ile Ala Lys Lys
 37 65 70 75 80
 39 Phe Ala Thr Ser Ser Gly Ile Glu Asn Gly Tyr Ile Tyr Val Leu Asn
 40 85 90 95
 42 Arg Asp Leu Phe Gly Gln Tyr Ser Ile Phe Glu Tyr Glu Val Glu His
 43 100 105 110
 45 Pro Glu Asn Pro Asn Glu Lys Glu Val Thr Ile Arg Ala Glu Asp Cys
 46 115 120 125
 48 Gly Cys Ile Pro Glu Glu Val Ile Ile Ala Lys Glu Leu Ile Glu Ile
 49 130 135 140
 51 Asn
 52 145
 55 <210> SEQ ID NO: 2
 56 <211> LENGTH: 145
 57 <212> TYPE: PRT
 58 <213> ORGANISM: Neisseria meningitidis
 60 <400> SEQUENCE: 2
 61 Met Gly Asn Phe Leu Tyr Arg Gly Ile Ser Cys Gln Gln Asp Glu Gln
 62 1 5 10 15

**Does Not Comply
Corrected Diskette Needed**

RAW SEQUENCE LISTING

DATE: 08/09/2006

PATENT APPLICATION: US/10/526,125

TIME: 09:34:27

Input Set : F:\Sequence listing.txt

Output Set: N:\CRF4\08092006\J526125.raw

```

64 Asn Asn Gly Gln Leu Lys Pro Lys Gly Asn Lys Ala Glu Val Ala Ile
65          20          25          30
67 Arg Tyr Asp Gly Lys Phe Lys Tyr Asp Gly Lys Ala Thr His Gly Pro
68          35          40          45
70 Ser Val Lys Asn Ala Val Tyr Ala His Gln Ile Glu Thr Gly Leu Tyr
71          50          55          60
73 Asp Gly Cys Tyr Ile Ser Thr Thr Thr Asp Lys Glu Ile Ala Lys Lys
74 65          70          75          80
76 Phe Ala Thr Ser Ser Gly Ile Glu Asn Gly Tyr Ile Tyr Val Leu Asn
77          85          90          95
79 Arg Asp Leu Phe Gly Gln Tyr Ser Ile Phe Glu Tyr Asp Val Glu His
80          100          105          110
82 Pro Glu Asn Pro Asn Glu Lys Glu Val Thr Ile Arg Ala Glu Asp Cys
83          115          120          125
85 Gly Cys Ile Pro Glu Glu Val Ile Ile Ala Lys Glu Leu Ile Glu Ile
86          130          135          140
88 Asn
89 145
92 <210> SEQ ID NO: 3
93 <211> LENGTH: 145
94 <212> TYPE: PRT
95 <213> ORGANISM: Neisseria meningitidis
97 <400> SEQUENCE: 3
98 Met Gly Asn Phe Leu Tyr Arg Gly Ile Ser Cys Gln Gln Asp Glu Gln
99 1          5          10          15
101 Asn Asn Gly Gln Leu Lys Pro Lys Gly Asn Lys Ala Glu Val Ala Ile
102          20          25          30
104 Arg Tyr Asp Gly Lys Phe Lys Tyr Asp Gly Lys Ala Thr His Gly Pro
105          35          40          45
107 Ser Val Lys Asn Ala Val Tyr Ala His Gln Ile Glu Thr Gly Leu Tyr
108          50          55          60
110 Asp Gly Cys Tyr Ile Ser Thr Thr Thr Asp Lys Glu Ile Ala Lys Lys
111 65          70          75          80
113 Phe Ala Thr Ser Ser Gly Ile Glu Asn Gly Tyr Ile Tyr Val Leu Asn
114          85          90          95
116 Arg Asp Leu Phe Gly Gln Tyr Ser Ile Phe Glu Tyr Glu Val Asp His
117          100          105          110
119 Pro Glu Asn Pro Asn Glu Lys Glu Val Thr Ile Arg Ala Glu Asp Cys
120          115          120          125
122 Gly Cys Ile Pro Glu Glu Val Ile Ile Ala Lys Glu Leu Ile Glu Ile
123          130          135          140
125 Asn
126 145
129 <210> SEQ ID NO: 4
130 <211> LENGTH: 145
131 <212> TYPE: PRT
132 <213> ORGANISM: Neisseria meningitidis
134 <400> SEQUENCE: 4
135 Met Gly Asn Phe Leu Tyr Arg Gly Ile Ser Cys Gln Gln Asp Glu Gln

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RAW SEQUENCE LISTING

DATE: 08/09/2006

PATENT APPLICATION: US/10/526,125

TIME: 09:34:27

Input Set : F:\Sequence listing.txt

Output Set: N:\CRF4\08092006\J526125.raw

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136 1          5          10          15
138 Asn Asn Gly Gln Leu Lys Pro Lys Gly Asn Lys Ala Glu Val Ala Ile
139          20          25          30
141 Arg Tyr Asp Gly Lys Phe Lys Tyr Asp Gly Lys Ala Thr His Gly Pro
142          35          40          45
144 Ser Val Lys Asn Ala Val Tyr Ala His Gln Ile Glu Thr Gly Leu Tyr
145          50          55          60
147 Asp Gly Cys Tyr Ile Ser Thr Thr Thr Asp Lys Glu Ile Ala Lys Lys
148 65          70          75          80
150 Phe Ala Thr Ser Ser Gly Ile Glu Asn Gly Tyr Ile Tyr Val Leu Asn
151          85          90          95
153 Arg Asp Leu Phe Gly Gln Tyr Ser Ile Phe Glu Tyr Glu Val Glu His
154          100          105          110
156 Pro Glu Asn Pro Asn Glu Lys Asp Val Thr Ile Arg Ala Glu Asp Cys
157          115          120          125
159 Gly Cys Ile Pro Glu Glu Val Ile Ile Ala Lys Glu Leu Ile Glu Ile
160          130          135          140
162 Asn
163 145
166 <210> SEQ ID NO: 5
167 <211> LENGTH: 14
168 <212> TYPE: PRT
169 <213> ORGANISM: Neisseria meningitidis, serogroup B
171 <400> SEQUENCE: 5
172 Phe Leu Ala Lys Leu Leu Lys Asp Phe Arg Arg Ile Thr Leu
173 1          5          10
175 <210> SEQ ID NO: 6
176 <211> LENGTH: 600
177 <212> TYPE: DNA
178 <213> ORGANISM: Neisseria meningitidis, serogroup B
180 <400> SEQUENCE: 6
181 tattcttggc gaagctgttg aaagacttcc gccgcattac cttataaaat aaaacatccc 60
182 tctcaagcag tctgataatg tttggattgc ttgagattga tgagtaatgg tgttaaattc 120
183 aacctttaa ttaataactt atgggaaatt tcttatatag aggcattagt tgccaacaag 180
184 atgagcaaaa taatggacag ttaaaaccta aaggtaataa agctgaagtt gcaattcggt 240
185 atgatggtaa gtttaaatat gatggtaaag ctacacatgg tccaagtgtg aagaatgcag 300
186 tttagccca tcaaatgaa acaggtctat atgacggatg ttatatatct acgacaacag 360
187 acaaggaaat tgccaagaaa ttgcaacaa gttccggcat cgaaaatggc tatatatatg 420
188 ttttaaata ggtttgttt ggtcaatatt ctatttttga atatgagggt gaacatccag 480
189 aaaacccaa tgagaaggaa gtaacaatca gagctgaaga ttgtggctgt attcctgaag 540
190 aagtgattat tgctaaagag ttgatagaaa ttaactaagt tgaaaggtca atataatggc 600
192 <210> SEQ ID NO: 7
193 <211> LENGTH: 180
194 <212> TYPE: DNA
195 <213> ORGANISM: Neisseria meningitidis, serogroup A
197 <400> SEQUENCE: 7
198 tattcttggc caacctgttg aaagacttcc gccgcattac tctgtaatcc gagcattttc 60
199 agacggcctg aataaaaagg ccgtctgaaa aaagaagtcc gaacatcatt cagaaagatt 120
200 agacatgagc ttagttgaat tgaaagtgcc cgacattggc ggtcacgaaa atgtagatat 180

```

RAW SEQUENCE LISTING

DATE: 08/09/2006

PATENT APPLICATION: US/10/526,125

TIME: 09:34:27

Input Set : F:\Sequence listing.txt

Output Set: N:\CRF4\08092006\J526125.raw

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202 <210> SEQ ID NO: 8
203 <211> LENGTH: 14
204 <212> TYPE: PRT
205 <213> ORGANISM: Neisseria meningitidis, serogroup A
207 <400> SEQUENCE: 8
208 Phe Leu Ala Asn Leu Leu Lys Asp Phe Arg Arg Ile Thr Leu
209 1          5          10
211 <210> SEQ ID NO: 9
212 <211> LENGTH: 19
213 <212> TYPE: PRT
214 <213> ORGANISM: Neisseria meningitidis, serogroup A
216 <400> SEQUENCE: 9
217 Met Ser Leu Val Glu Leu Lys Val Pro Asp Ile Gly Gly His Glu Asn
218 1          5          10          15
220 Val Asp Ile
224 <210> SEQ ID NO: 10
225 <211> LENGTH: 180
226 <212> TYPE: DNA
227 <213> ORGANISM: Neisseria gonorrhoeae
229 <400> SEQUENCE: 10
230 tattcctggc gaacctgttg aaagacttcc gccgcattac cttataaaat aaaacatccc 60
231 tctcaagcag tctgataatg tttggattgc ttgagattga tgagtgatgg tgttaaattc 120
232 aaactttaaa ttaataactt atgggaaatt tcttatttat atagaggcat tagttgccaa 180
234 <210> SEQ ID NO: 11
235 <211> LENGTH: 14
236 <212> TYPE: PRT
237 <213> ORGANISM: Neisseria gonorrhoeae
239 <400> SEQUENCE: 11
240 Phe Leu Ala Asn Leu Leu Lys Asp Phe Arg Arg Ile Thr Leu
241 1          5          10
243 <210> SEQ ID NO: 12
244 <211> LENGTH: 7
245 <212> TYPE: PRT
246 <213> ORGANISM: Neisseria gonorrhoeae
248 <400> SEQUENCE: 12
249 Met Gly Asn Phe Leu Phe Ile
250 1          5
252 <210> SEQ ID NO: 13
253 <211> LENGTH: 147
254 <212> TYPE: PRT
255 <213> ORGANISM: Vibrio cholerae
257 <400> SEQUENCE: 13
258 Lys Leu Tyr Arg Ala Asp Ser Arg Pro Pro Asp Glu Ile Lys Gln Ser
259 1          5          10          15
261 Gly Gly Leu Met Pro Arg Gly Gln Ser Glu Tyr Phe Asp Arg Gly Thr
262          20          25          30
264 Gln Met Asn Ile Asn Leu Tyr Asp His Ala Arg Gly Thr Gln Thr Gly
265          35          40          45
267 Phe Val Arg His Asp Asp Gly Tyr Val Ser Thr Ser Ile Ser Leu Arg

```

RAW SEQUENCE LISTING

DATE: 08/09/2006

PATENT APPLICATION: US/10/526,125

TIME: 09:34:27

Input Set : F:\Sequence listing.txt

Output Set: N:\CRF4\08092006\J526125.raw

```

268      50              55              60
270 Ser Ala His Leu Val Gly Gln Thr Ile Leu Ser Gly His Ser Thr Tyr
271 65              70              75              80
273 Tyr Ile Tyr Val Ile Ala Thr Ala Pro Asn Met Phe Asn Val Asn Asp
274              85              90              95
276 Val Leu Gly Ala Tyr Ser Pro His Pro Asp Glu Gln Glu Val Ser Ala
277              100             105             110
279 Leu Gly Gly Ile Pro Tyr Ser Gln Ile Tyr Gly Trp Tyr Arg Val His
280              115             120             125
282 Phe Gly Val Leu Asp Glu Gln Leu His Arg Asn Arg Gly Tyr Arg Asp
283              130             135             140
285 Arg Tyr Tyr
286 145

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/526,125

DATE: 08/09/2006

TIME: 09:34:28

Input Set : F:\Sequence listing.txt

Output Set: N:\CRF4\08092006\J526125.raw

L:4 M:280 W: Numeric Identifier already exists, <110> found multiple times
L:5 M:280 W: Numeric Identifier already exists, <110> found multiple times
L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date